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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,527	11/06/2003	Daniel Baumberger	42339-192058	7357
26694	7590	03/21/2008		
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WASHINGTON, DC 20043-9998				
EXAMINER				
SEYE, ABDOU K				
ART UNIT		PAPER NUMBER		
2194				
MAIL DATE		DELIVERY MODE		
03/21/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,527

Applicant(s)

BAUMBERGER, DANIEL

Examiner

Abdou Karim Seye

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8, 10-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 10-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Argument

1. Claims 1, 3-8, 10-15 and 17-20 are pending in this application

Claim Objections

2. Claim 10 is objected to because it depends on cancelled claim 9.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

4. Claims 1, 3-8, 10-15 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- A. The following claims language is unclear and indefinite:

As per claim 1, line 4, it is not clearly understood what is meant by “a page table in a processor” since, as it's known in the art that a page table is maintained in memory space.

As per claim 1, line 5, it is not clearly understood what is meant by "the virtual machine in an address space" since, as it's known in the art that only virtual machine data/code can be maintained in memory space.

As per claim 8, line 15, it is not clearly understood what is meant by "a page table in a processor" since, as it's known in the art that a page table is maintained in memory space.

As per claim 8, line 15-16, it is not clearly understood what is meant by "the virtual machine in an address space" since, as it's known in the art that only virtual machine data/code can be maintained in memory space.

As per claim 15, line 5, it is not clearly understood what is meant by "a page table in a processor" since, as it's known in the art that a page table is maintained in memory space.

As per claim 15, line 5-6, it is not clearly understood what is meant by "the virtual machine in an address space" since, as it's known in the art that only virtual machine data/code can be maintained in memory space.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-8, 10-15 and 17-20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over **Monnie et al. (US 20050086237)** in view of **Holmberg (6345351)**.

As per Claim 1, 8 and 15, Monnie teaches the invention substantially as claimed including a method, system and product comprising:

utilizing first and second virtual machine queues (FIG. 11: 404 and 406) associated with respective first and second virtual machines to communicate between the virtual machines (FIG. 12).

However, Monnie does not explicitly teach updating a page table in a processor by placing a page associated with the first virtual machine in an address space associated with the second virtual machine.

Whereas, in the same field of endeavor Holmberg discloses updating a shared physical page memory/ table address space with virtual pages; and placing data in the same address space (FIG. 6a; col. 10, lines 1-65; col. 13, lines 65-67; col. 14, lines 1-67; FIG. 8a).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to modify Monnie's invention with Holmberg's invention to include a mechanism for updating a page table/address associated with concurrent execution of virtual machines in order to improve memory management for shared space address . One would be motivated to include a mechanism for updating a page table accessed by concurrent virtual machines reading and writing to an address space in order to maintain data integrity (Holmberg's; col. 10, lines 54-65).

As to claim 3, Monnie teaches, wherein updating includes: placing at least one of data and an address associated with the page into a first virtual machine control structure (FIG. 12: 416) associated with the first virtual machine; exiting the first virtual machine; placing the at least one of data and address into the second virtual machine queue; and dequeuing the second virtual machine queue (FIG. 12; paragraph 89-94; FIG. 10A/B).

As to claim 4, Monnie further teaches wherein dequeuing includes: reading the at least one of data and address into a second virtual machine control structure associated with the second virtual machine; and storing the at least one of data and address into the

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address space associated with the second virtual machine (FIG. 10A; FIG. 12; paragraph 89-94).

As to 5-6, they are rejected for the same reasons as the claims above.

As to claim 7; Monnie teaches, conveying identification information associated with the first and second virtual machines between the first and second virtual machines via the first and second virtual machine queues (FIG. 12: 416; paragraph 89-92).

As to claims 10-14 and 17-20; they are rejected for the same reasons as the claims above.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Abdou Seye whose telephone number is (571) 270-1062. The examiner can normally be reached Monday through Friday from 7:30 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, contact the examiner's supervisor, An Meng at (571) 272-3756. The fax phone number for

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formal or official faxes to Technology Center 3600 is (571) 273-8300. Draft or informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 273-6722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-3600.

AKS

March 4, 2008

/Meng-Ai An/

Supervisory Patent Examiner, Art Unit 2195